

## ABSTRACT OF THE DISCLOSURE

Disclosed is a method for operating a mobile station (100) that includes an RF receiver (220) having an RF front end (1A) followed by a base band section (1B). The base band section includes an AGC block (7') that contains a DC blocking capacitor (C1) coupled in series between an input node ( $V_{in}$ ) of the AGC block and an input to a gain element (7A). The method has steps of tuning from a current RF channel to another RF channel to make a signal strength measurement, and reducing a time constant of the AGC circuit by shorting around the DC blocking capacitor. Also disclosed is a method for operating the mobile station where the base band section includes the AGC block that contains an AC coupling capacitance coupled in series with a first resistance (R1) between an input node of the AGC block and an input to the gain element. This method has steps of operating the AC coupling capacitance and the first resistance as a first order low pass filter for attenuating the AC value of an input signal, and closing at least one switch for switching in additional capacitance and resistance for transforming the first order low pass filter to a second order low pass filter for increasing the attenuation of the AC value of the input signal. In these various embodiments circuit topologies are described for both inverting and non-inverting operational amplifier implementations.

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